

Aprilaire®

Humidifiers



Owner's Manual

**For Models 110, 112, 220, 224, 350, 360, 440,
445, 448, 558, 560, 568, 760 & 768**

**Includes Safety & Operating Instructions
and Warranty Information**

READ AND SAVE THESE INSTRUCTIONS

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WARNING

120 volts may cause injury from electrical shock.
Disconnect power and shut off water supply before servicing.

CAUTION

Sudden operation may cause personal injury or property damage. Turn humidistat or Humidifier Control to "OFF" or lowest setting before servicing

INTRODUCTION

Thank you for your recent Aprilaire® Humidifier purchase. We sincerely appreciate your business and are pleased to add your name to our growing list of customers. With this purchase, you have invested in the highest quality equipment currently available. Research Products Corporation is the largest manufacturer of whole house humidifiers, air cleaners and energy recovery ventilators and is a recognized leader in the heating and air conditioning industry today.

Please be assured that in addition to product quality, we are also committed to unit performance as well as customer satisfaction. Your unit will require periodic maintenance to assure you of continued fine performance. Please proceed as shown on page 8 to obtain service parts and/or replacement Water Panel® evaporators.

Now, please take a few minutes and read the appropriate sections of this booklet. This will familiarize you with the benefits you will receive from the equipment you just purchased and help you understand the routine maintenance that will be required. Be sure to register your humidifier with us for our records and your protection. You may do so by registering online at: www.aprilaire.com/warranty.

Genuine Aprilaire Replacement Water Panel® evaporators are available from your installing contractor or from most other heating and air conditioning contractors in your area. Use the dealer locator in our web site (www.aprilaire.com) or look in the Yellow Pages under Humidifying Apparatus or Heating & Air Conditioning Contractors. Purchase only genuine Aprilaire Water Panels to maintain peak performance.



I. PRINCIPLE OF OPERATION

With your purchase of a humidification system, you have invested in a humidifier that operates on the evaporative principle – nature's own way of adding moisture – and will provide the proper relative humidity all during the heating season. It is very possible that you have questions concerning your humidifier – questions on what it can do for you, and what you should do to receive maximum benefits from it. This booklet is intended to help you do exactly that.

Nature, in producing an invigorating comfortable April day, combines just the right temperature and the right amount of moisture. Aprilaire Humidifiers employ the same principle, with refinements, to give you the proper relative humidity for maximum allowable comfort all winter long.

The important considerations in the evaluation of a humidifier are Positive Control, Sufficient Capacity, Trouble-free Performance and Minimum Maintenance. The operating principle of your Aprilaire provides all of these advantages. Here, briefly, is the method:

The Aprilaire Humidifier (except the Models 350 and 360) is installed to operate in conjunction with the furnace blower motor. When the humidistat or Humidifier Control calls for humidity and the blower motor is operating, water flows to the distribution tray located at the top of the unit. The water is uniformly distributed across the width of the tray and through a scientifically designed system of outlets. It flows by gravity over the Water Panel® evaporator, the heart of the unit. Dry, hot air is moved through the moisture-laden Water Panel evaporator where evaporation takes place. The now humidified air carrying moisture in vapor form (nature's own way) is circulated throughout the home.

The Models 350 and 360 use service hot water (140°F maximum) for its heat source, as heat is needed for evaporation. While the water going to the unit is hot, the flushing water to the drain will be cold. The heat is extracted during the evaporation process.

The correct water flow is determined by an orifice included with each drain type unit. When the unit is operating, there will be a small, steady stream of water to drain, which flushes away most of the trouble-causing minerals. Do not use the saddle valve to regulate the water flow. It is designed to be completely opened or closed. The minerals and solid residue not trapped by the replaceable Water Panel evaporator are flushed down the drain in units with a drain connection. The drain also eliminates the problems caused by stagnant water. This is the most effective and least expensive method to dispose of trouble-causing minerals.

Capacity is high because an average home (10,000 cu. ft.) requires the addition of approximately 9 gallons of water per day to maintain 35% relative humidity when the outside temperature is 20°. The smallest Aprilaire Humidifier under most operating conditions, has this humidifying capacity. Trouble-free performance and minimum maintenance are assured by the design features of the Aprilaire Humidifier. All unit housing parts that come in contact with water are non-metal and will never rust or corrode. Neither heat nor water will affect them under normal operating conditions.

The Water Panel evaporator, designed especially for uniform, high evaporation, along with the Scale Control Insert also efficiently traps mineral deposits which are often the cause of damage to working parts in ordinary humidifiers. No "white dust" can be distributed throughout the living quarters. The Water Panel evaporator is the heart of the unit and must be in good condition to assure high capacity trouble-free performance. It should be changed annually.

Older design water distribution trays have a granular coating in the bottom of the distribution tray to provide equal distribution of water to each of the openings assuring an even flow over the Water Panel evaporator. **Do not clean the mineral scale off the bottom of the water distribution tray at the end of the humidification season.** If the granular coating is removed, it is not necessary to purchase a new distribution tray. You can accomplish the same uniform performance by applying a small amount of liquid dishwashing soap over the entire inside surface of the water distribution tray. This will allow the water to flow evenly through each of the openings, provided the unit is level in order to achieve maximum capacity.

The current distribution tray which incorporates a synthetic fabric liner that replaces the granular coating, is designed to deliver water uniformly over the entire top surface of the Water Panel evaporator, provided it is mounted level. It is normal for some mineral deposits to form in the distribution tray as it dries out between humidification cycles. These deposits can actually help distribute water in the tray, but if they form enough to block the openings, they should be removed as described in the "Periodic Preventative Maintenance" section of this manual.

There are many humidifiers on the market. They all add moisture... with varying degrees of efficiency. None, however, can provide the features, design, and performance incorporated into your Aprilaire Humidifier.

II. OPERATING INSTRUCTIONS- 448, 558, 568, 768

There are two possible modes of operation of your Aprilaire Humidifier Control - Automatic and Manual. An explanation of both follows:

Automatic Mode: (Manual Mode-see pg 6)

Your Humidifier Control is installed in the cold air return. **During the first heating season**, your Humidifier Control needs to be set initially to match your home's condition. Please follow these steps when adjusting your control (refer to Figure A).

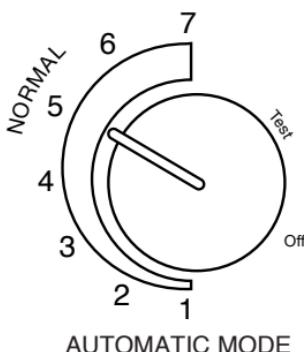
1. Turn the dial setting knob to "5," which is within the normal range. During the next 24-48 hours it may be necessary to adjust the dial for more or less humidity, depending on your personal comfort and home's requirements. Refer to the "Operation Guide" (Table 1).
2. During the coldest portion of the first heating season, minor adjustments may be necessary. This is dependent upon your individual home construction, refer to the "Operation Guide" (Table 1).

TABLE 1 – Operation Guide

Condition	Solution
Condensation on windows	Reduce the setting on the control dial by 1 increment.
Lack of humidity	Increase the setting on the control dial by 1 increment.
Humidifier does not operate	Turn dial to "Test." Make certain furnace blower is operating and furnace is calling for heat. If unit still doesn't operate, consult a heating contractor.
Humidifier won't shut off	Turn dial to "Off." If unit continues to operate, consult a heating contractor.
Test mode	System operation is checked by setting the knob to "Test." Make certain furnace blower is operating and furnace is calling for heat. Humidifier will operate for one minute.

The relative humidity in your home will now be accurately controlled to meet your needs and should not need further adjustment during future heating seasons. Make note of the dial setting in the event you temporarily move the knob when performing annual maintenance of the Aprilaire Humidifier.

FIGURE A



Your Aprilaire Automatic Humidifier, is a high precision system that will accurately maintain the relative humidity in your home. For every 1° change in outdoor temperature, the control will automatically adjust the indoor relative humidity (RH) by 1/2%. If you would like to determine the RH in your home, follow these steps:

1. Determine the outdoor temperature.
2. Activate the furnace blower by setting your thermostat to a higher temperature.
3. Turn the control dial setting to the "Off" position. Then, slowly turn the dial clockwise until you hear the solenoid valve "click on." Next, slowly turn the dial counter clockwise until you hear the solenoid valve "click off." At this point, make note of the dial setting.
4. Locate your dial setting on Table 2. Follow the dial setting to the right until it intersects with the current outdoor temperature. This is the relative humidity in your home under existing conditions.
5. Return the thermostat and the Humidifier Control to their original settings.

The Automatic Humidifier will accurately control the humidity in your home to a maximum of 45% RH and a minimum of 10% RH. The values of outdoor temperature and dial settings may fall in between or outside of the listed values in Table 2. In these cases, you can only approximate your home's actual indoor RH.

TABLE 2 – % Relative Humidity Guide

Outdoor Temperature (°F)

Dial Setting	-10	0	10	20	30	40
1	10	10	10	15	20	25
2	10	10	15	20	25	30
3	10	15	20	25	30	35
4	15	20	25	30	35	40
5	20	25	30	35	40	45
6	25	30	35	40	45	45
7	30	35	40	45	45	45

As an example, if the outdoor temperature is 20°F, and, following step 3, the humidifier turns off at "5" on the dial range, then the RH in your home is 35%.

Manual Mode: (Automatic Mode – see pg 4)

Your Aprilaire Humidifier is controlled by a Humidifier Control installed either in the living area or in the cold air return. It is important to anticipate a drop in outdoor temperature and reduce the setting accordingly to avoid excessive condensation. For example, with an outdoor temperature of 20° the correct setting will be 35% relative humidity. If the temperature is expected to fall to 0° that evening, then merely reduce the setting to 25% several hours prior to the temperature change.

The recommended settings on the Humidifier Control are based on years of research (see Table 3) and experience for the average home. These settings represent a compromise between RH levels that would be most desirable for comfort reasons and humidity levels that are suitable for protection of your home. For example, a wintertime indoor RH of 50% may be considered ideal for comfort, but unfortunately, it probably would result in damage to your home. Observance of the recommended RH levels on your Humidifier Control, therefore, is an important safeguard. Condensation of water on inside windows in the form of fogging or frost is usually an indication of too much relative humidity. This same condensation can take place in other areas in your home with the possibility of damage resulting.

TABLE 3 – Outdoor-Indoor Relative Humidity

Outside Temperature	Recommended RH
+40°F	45%
+30°F	40%
+20°F	35%
+10°F	30%
0°F	25%
-10°F	20%
-20°F	15%

If you would like to determine the RH in your home, follow these steps:

1. Activate the furnace blower by setting your thermostat to a higher temperature.
2. Turn the control dial setting to the “Off” position. Then, slowly turn the dial clockwise until you hear the solenoid valve “click on”. Next, slowly turn the dial counter clockwise until you hear the solenoid valve “click off”. This is the relative humidity in your home under existing conditions.
3. Return the thermostat and the Humidifier Control to their original settings.

III. OPERATING INSTRUCTIONS- 110, 112, 220, 224, 350, 360, 440, 560, 760

Your new Aprilaire Humidifier is controlled by a manual humidistat installed either in the living area or in the cold air return. It is important to anticipate a drop in temperature and reduce the setting accordingly to avoid excessive condensation. For example, with an outside temperature of 20° the correct setting will be 35% relative humidity. If the temperature is expected to fall to 0° that evening, then merely reduce the setting to 25% several hours prior to the temperature change (see table 3).

The humidistat is a precision instrument that can be used to determine the RH accurately in your home during the winter. Turn the dial to a lower setting, then reverse the dial direction slowly until a "click" is heard. At this point, read the RH on the dial. This will be very close to the actual RH in your home.

IV. ADDITIONAL INFORMATION- ALL MODELS

To check the humidifier operation, set the Humidifier Control above the click point, make sure that the water saddle valve is open and that there is electricity to the unit. With all models except the 350 and 360 Aprilaire Humidifiers, the furnace blower motor must be operating for the Aprilaire Humidifier to function. After the humidifier has operated for several minutes and water is entering the unit and coming out at the drain, reduce the setting below the click point and the unit should automatically shut off.

Be sure to keep fireplace dampers closed when not in use. They provide an excellent escape route for heat, as well as humidity.

On occasion, indoor moisture producing activities such as clothes drying, cooking, showers, etc., may raise the relative humidity level higher than it should be, even though the Aprilaire Humidifier is not operating. Telltale indications are condensation or frost on cold surfaces such as windows, doors, walls, etc. If such condensation persists for several hours, your home should be ventilated to dissipate the potential damaging excess moisture levels.

V. EFFECT OF WATER CHARACTERISTICS

Your humidifier will operate effectively using either hot, cold, hard or mechanically softened water. Whether to use available tap water, even though it may be quite hard, or chemically softened water, is a common concern to homeowners when installing a humidifier.

Water used in homes contains varying amounts of minerals. The residue remaining as a result of hard water evaporation is primarily calcium and magnesium components and is usually quite hard, scaly, and dense.

Residue from softened water tends to be soft and fluffy and has a greater volume than hard water scale. The service life of a Water Panel evaporator may be extended by using hard water, but in either case, the Water Panel evaporator is usually changed once a year.

In the drain-equipped models, most of these solids are effectively controlled by flushing them down the drain.

In the Models 448 and 445 Aprilaire Humidifiers, these solids will build up on the evaporator surface, in the reservoir and pump section. This is why proper maintenance is important and necessary. Service hot water, 140° maximum, is recommended with drain type units for increasing capacity and for heat pump applications.

VI. ANNUAL MAINTENANCE

For best performance, we recommend that you replace the water panel evaporator in your Aprilaire Humidifier annually. See individual model instructions for additional maintenance.

To purchase a Water Panel:

- Call the installer of your Aprilaire Humidifier.
This information is often found on your equipment.
- Call your heating and air conditioning dealer.
- Use our "Dealer Locator" at: www.aprilaire.com
- Look in the Yellow Pages under Humidifying Apparatus or Heating & Air Conditioner Contractors.
- If none of the above is successful and you still need information, please feel free to write us.

VII. ANNUAL SUMMER SHUTDOWN

For Models 220, 224, 440, 445, 448, 558, 560, and 568 close the bypass damper in the bypass pipe. For the Models 445 and 448, empty the reservoir.

HUMIDIFIER CONTROL:

Humidifiers controlled by the Humidifier Control require no control adjustment. Shut off the water supply to the humidifier by closing the saddle valve.

MANUAL HUMIDISTAT:

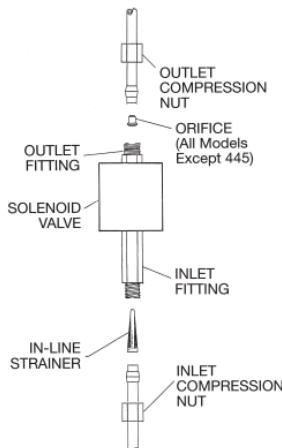
For humidifiers controlled by a manual humidistat, simply turn the humidistat to the "Off" position. Shut off the water supply to the humidifier by closing the saddle valve.

VIII. PERIODIC PREVENTATIVE MAINTENANCE

NOTE: Periodic inspection and preventive maintenance of your total heating system is important for efficient and safe operation. Your heating contractor should include humidifier service at the same time.

All models, except No's. 448 and 445, are equipped with an in-line water strainer and orifice as shown below. These parts should be inspected and cleaned periodically to assure continued proper unit performance.

INSPECTION AND SERVICE INSTRUCTIONS

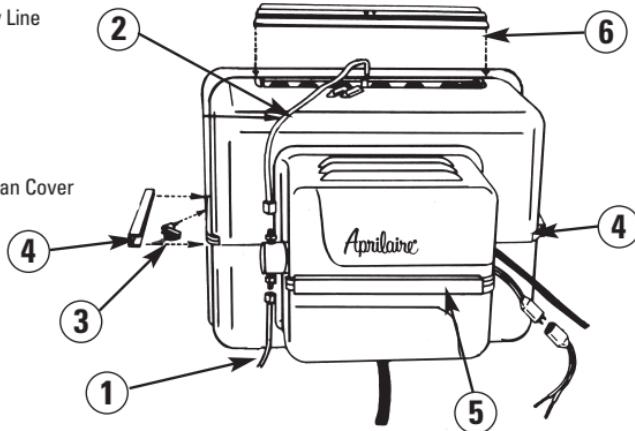


1. Disconnect electrical power to the furnace and shut off water supply.
2. Disconnect the water line at the inlet compression nut.
3. Remove the in-line strainer from inside the inlet fitting by using a small nail or wire.
4. Flush the in-line strainer clean or replace with a new strainer, Service Department, Part No. 4004.
5. Replace the in-line strainer and reconnect the inlet water line.
(Double Wrench To Prevent Leaking.)
6. Disconnect the water line at the outlet compression nut.
7. For units with plastic feed tubes, inspect the tube by gently flexing it and looking for cracks or signs of wear. Replace tube if it is cracked, brittle or has been damaged.
8. Remove the orifice from the copper or plastic tube and make sure this small opening is unplugged.
9. Replace the orifice and reconnect the outlet water line.
(Double Wrench To Prevent Leaking.)
10. Remove the drain hose from the bottom of the unit and flex it to remove any mineral deposits or blockage. Flush the hose with water under pressure to clear it of any debris. Make sure the drain hose has a constant downward slope and is not flattened or blocked.
11. Turn on water supply and reconnect electrical power to the furnace.

MAINTENANCE INSTRUCTIONS for APRLAIRE HUMIDIFIER MODELS 110-112

**WARNING! 120 volts may cause serious injury from electrical shock.
Disconnect power and shut off water supply before servicing.**

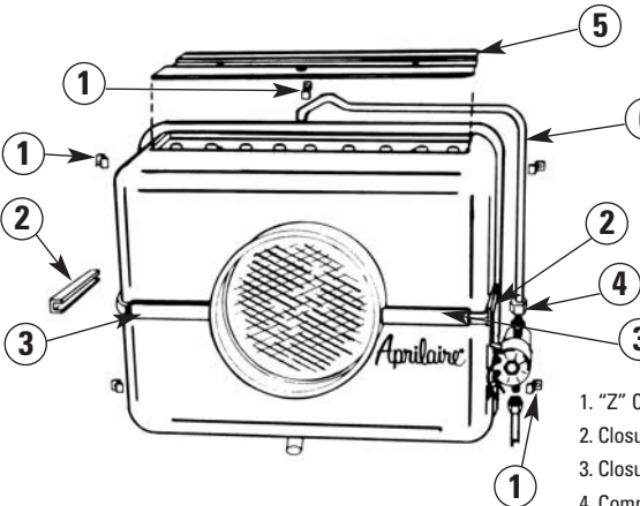
1. Water Supply Line
2. Feed Tube
3. Swing Locks
4. Closure Clip
5. Closure Clip
6. Distribution Pan Cover



1. Note Humidistat setting and turn dial to the "off" position.
2. Disconnect electrical power and turn off water supply.
3. Disconnect: a) 120 volt electrical service. b) Copper water supply line (1) & feed tube (2). c) Drain line. d) 24 volt leads.
4. Turn two swing locks (3), one at either side of lower housing off humidifier flange.
5. Lift humidifier straight up until bottom of unit clears lip of lower housing.
Pull unit out at bottom, lower and remove.
6. Slide off three closure clips (4 & 5) that holds 2 halves of unit together.
7. Remove upper half of unit.
8. Remove Water Panel evaporator and Scale Control Insert. Remove Water Panel evaporator from Insert and clean Insert by flexing or using putty knife. Inspect Water Panel evaporator and replace with a new Water Panel evaporator (Stock No. 10 for Model 110 and Stock No. 12 for Model 112), with colored spot up.
9. Remove the plastic drain hose from the bottom of the unit and flex it to loosen the internal calcium deposits. Then flush it with water under pressure and slip it back onto the black drain fitting. Make sure the drain hose has a constant downward slope and is not flattened or blocked.
10. Remove the water distribution pan cover (6) and clean "V" openings in water distribution section but **do not scrape off granular coating from bottom**. This helps to insure proper, even water flow for maximum performance. See page 2 if removed.
11. Oil motor with 2 drops of SAE 20 oil in oil holes at each end of motor housing.
12. **IMPORTANT:** When installing Scale Control Insert and Water Panel evaporator in the humidifier, the Insert spout must discharge directly into unit drain.
13. Reassemble unit, position feed tube in compression fitting, tighten compression nuts and secure copper feed tube to upper housing with feed tube clamp.
14. In reverse order, complete steps 1 and 4 to reinstall your humidifier, and check unit operation.

MAINTENANCE INSTRUCTIONS for APRILAIRE HUMIDIFIER MODELS 220-224

CAUTION! Sudden operation may cause personal injury or property damage. Turn humidistat to "off" or lowest setting before servicing.



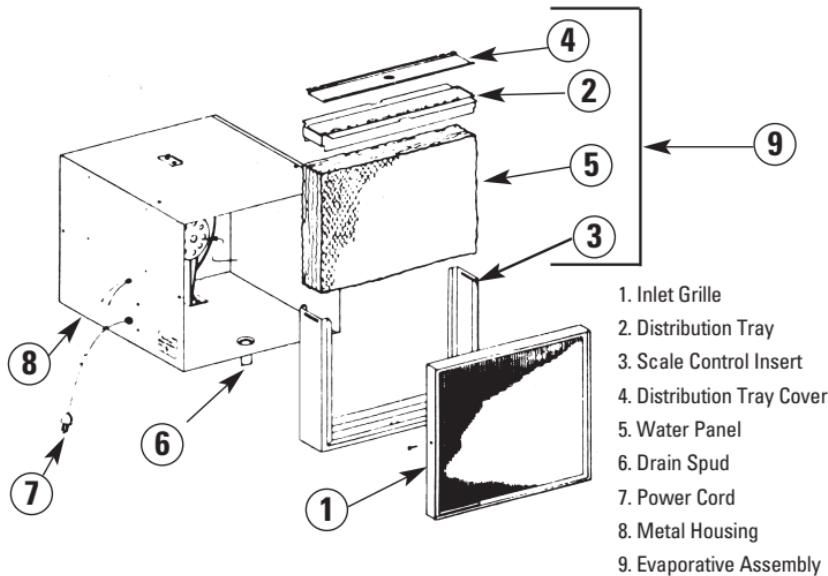
1. "Z" Clip
2. Closure Clip
3. Closure Clip
4. Compression Fitting
5. Distribution Pan Cover
6. Feed Tube

1. Note Humidistat setting and turn dial to the "off" position.
2. Turn off water supply and turn down humidistat.
3. Remove three "Z" clips (1) that hold top half of unit to furnace plenum.
4. Slide off four closure clips (2 & 3) that hold two halves of unit together.
5. Loosen compression fitting (4) on copper feed tube (6) and remove.
6. Remove top screw holding sheet metal elbow to humidifier.
7. Remove top half of unit (lift straight up).
8. Remove the water distribution pan cover (5) and clean "V" openings in water distribution section **but do not scrape off granular coating from bottom**. This helps to insure proper, even water flow for maximum performance. See page 3 if removed.
9. Remove Water Panel evaporator and Scale Control Insert. Remove Water Panel evaporator from Insert and clean Insert by flexing or using putty knife. Inspect Water Panel evaporator and replace with a new Water Panel evaporator (Stock No. 10 for Model 220 and Stock No. 12 for Model 224), with colored spot up.
10. Remove the drain hose from the bottom of the unit and flex it to loosen the internal calcium deposits. Then flush it with water under pressure and slip it back onto the black drain fitting. Make sure the drain hose has a constant downward slope and is not flattened or blocked.
11. **IMPORTANT:** When installing the Scale Control Insert and Water Panel evaporator in the humidifier, the Insert spout must discharge directly into unit drain.
12. Reassemble unit, position feed tube in compression fitting, tighten compression nuts and secure copper feed tube to upper housing with feed tube clamp. Attach to furnace plenum.
13. Turn on water supply, turn up humidistat and check unit operation.

MAINTENANCE INSTRUCTIONS for

APRLAIRE HUMIDIFIER MODELS 350-360

WARNING! 120 volts may cause serious injury from electrical shock.
Disconnect power and shut off water supply before servicing.

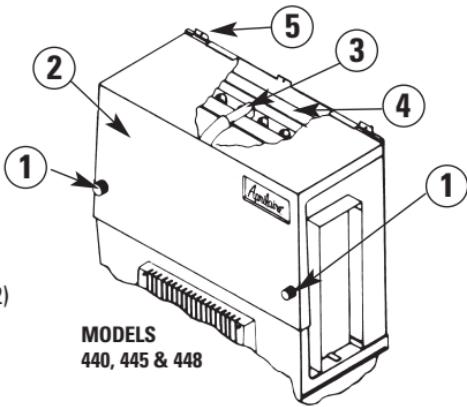


1. Note Humidistat setting and turn dial to the "off" position.
2. Disconnect electrical power and turn off water supply.
3. Remove screws of the inlet grille (1). The grille can now be removed from the metal housing (8).
4. Lift the complete plastic framed evaporative section out of the humidifier housing.
5. To remove the distribution tray (2) from evaporative assembly (9), push down on tray and pull out on white plastic frame (Scale Control Insert) (3). To clean the "V" openings of the tray, it will be necessary to gently pry the distribution tray cover (4) from the tray. Follow instructions below depending upon the type of distribution tray in your humidifier.
For trays with a synthetic fabric liner: Lightly scrape out or brush off any mineral deposits, being careful not to stretch or loosen the synthetic fabric liner. Soaking the tray in vinegar or a lime-removing agent is helpful when trying to remove stubborn mineral deposits.
For trays with granular coating: **Do not scrape off the granular coating,** but lightly scrape out any mineral deposits and clean the "V" notches. This textured surface helps ensure even water flow for maximum performance. See page 3 if removed.
6. Remove Water Panel evaporator (5) from the Scale Control Insert (3). Scrape the Insert with a putty knife or similar tool and flush clean with water. Install new Water Panel evaporator (Stock No. 35). Snap plastic cover into tray and tray into Scale Control Insert.
7. Inspect the plastic feed tube by gently flexing it and looking for cracks or signs of wear. Replace tube if it is cracked, brittle or has been damaged.
8. Remove the drain hose from the bottom of the unit and flex it to loosen the internal calcium deposits. Then flush it with water under pressure and slip it back onto the black drain fitting (6). Make sure the drain hose has a constant downward slope and is not flattened or blocked.
9. Re-install complete plastic framed evaporative section and intake grille.
10. Reconnect electrical power.
11. Turn on water supply and check unit operation.

MAINTENANCE INSTRUCTIONS for APRILAIRE HUMIDIFIER MODEL 440

CAUTION! Sudden operation may cause personal injury or property damage. Turn humidistat to "off" or lowest setting before servicing.

1. Note humidistat setting and turn dial to the "Off" position.
2. Remove two aluminum knobs (1), swing up and remove top cover (2) from humidifier.
3. Place finger under plastic water nozzle (3) at top of water distribution tray (4). Lift up to pop outlet loose from hole and notch in distribution tray.
4. Tip forward and lift the complete plastic framed evaporative assembly out of the humidifier.
5. To remove plastic water distribution tray from evaporative assembly, push down on pan and out on plastic frame (Scale Control Insert). Follow instructions below depending upon the type of distribution tray in your humidifier.
For trays with a synthetic fabric liner: Lightly scrape out or brush off any mineral deposits, being careful not to stretch or loosen the synthetic fabric liner. Soaking the tray in vinegar or a lime-removing agent is helpful when trying to remove stubborn mineral deposits.
For trays with granular coating: **Do not scrape off the granular coating**, but lightly scrape out any mineral deposits and clean the "V" notches. This textured surface helps ensure even water flow for maximum performance. See page 3 if removed.
6. Remove Water Panel evaporator from Scale Control Insert and clean Insert by flexing or using putty knife. Inspect Water Panel evaporator (Stock No. 12) and replace if necessary with colored spot up. Snap plastic water distribution tray back in place.
7. For units with plastic feed tubes, inspect the tube by gently flexing it and looking for cracks or signs of wear. Replace tube if it is cracked, brittle or has been damaged.
8. Reinstall evaporative section in the humidifier with notch and hole in plastic water distribution pan toward you. Pop nozzle fitting on end of feed tube into plastic water distribution pan.
9. To reinstall top cover, hook back under lip of metal frame (5), drop in place and tighten two aluminum knobs.
10. Remove drain hose and flush with water under pressure. Mineral deposits in hose may be loosened by flexing hose.
11. Reattach drain hose. Make sure the drain hose has a constant downward slope and is not flattened or blocked.
12. Turn humidistat to highest setting and make sure the furnace blower is operating. Humidifier will operate if RH is less than 50%.
13. Set humidistat to its original position.

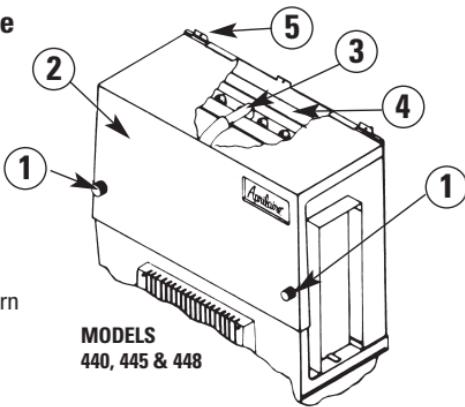


1. Cover Knob
2. Top Cover
3. Feed Nozzle
4. Distribution Tray
5. Metal Frame

MAINTENANCE INSTRUCTIONS for APRLAIRE HUMIDIFIER MODELS 445-448

WARNING! 120 volts may cause serious injury from electrical shock. Disconnect power and shut off water supply before servicing.

1. Note humidistat or Humidifier Control setting and turn dial to the "Off" position.
2. Disconnect electrical power and turn off water supply.
3. Remove two aluminum knobs (1), swing up and remove top cover (2) from humidifier.
4. Place finger under plastic water nozzle (3) at top of water distribution tray (4). Lift up to pop outlet loose from hole and notch in distribution tray.
5. Tip forward and lift the complete plastic framed evaporative section out of the humidifier.
6. To remove plastic water distribution tray from evaporative section, push down on pan and out on plastic frame (Scale Control Insert). Follow instructions below depending upon the type of distribution tray in your humidifier.
For trays with a synthetic fabric liner: Lightly scrape out or brush off any mineral deposits, being careful not to stretch or loosen the synthetic fabric liner. Soaking the tray in vinegar or a lime-removing agent is helpful when trying to remove stubborn mineral deposits.
For trays with granular coating: **Do not scrape off the granular coating**, but lightly scrape out any mineral deposits and clean the "V" notches. This textured surface helps ensure even water flow for maximum performance. See page 3 if removed.
7. Remove Water Panel evaporator and Scale Control Insert. Remove Water Panel evaporator from Insert and clean insert by flexing or using putty knife. Inspect Water Panel evaporator and replace with a new Water Panel evaporator, if necessary, with colored spot up.
8. Re-install water distribution tray. Reinstall evaporative section in the humidifier, with notch and hole in distribution tray toward you. Pop hose fitting on end of feed tube into distribution tray.
9. See page 15 for reservoir and pump cleaning.

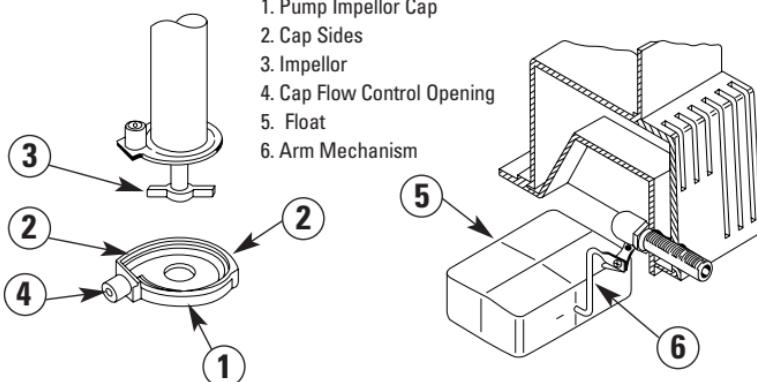


1. Cover Knob
2. Top Cover
3. Feed Nozzle
4. Distribution Tray
5. Metal Frame

MAINTENANCE INSTRUCTIONS for MODELS 445-448 RESERVOIR PUMP SECTIONS

WARNING! 120 volts may cause serious injury from electrical shock.
Disconnect power and shut off water supply before servicing.

IMPORTANT: Clean and refill reservoir, hose, pump and float every 30 days during heating season.



A. TO CLEAN RESERVOIR

1. Hold bottom of reservoir (IT IS FILLED WITH WATER) and loosen retainer knob. Carefully lower reservoir, disengaging from metal frame.
2. Empty water, remove partition and reservoir liner.
3. Clean or replace reservoir liner. Reinstall partition in liner. To replace reservoir, hook back of reservoir over lip of dark metal frame and tighten knob.

B. TO CLEAN HOSE

1. Disconnect hose from pump and pull hose up through hole.
2. Flex hose to loosen scale and flush clean with a stream of water.
3. Clean nozzle at the same time.

C. TO CLEAN PUMP

1. Remove pump impellor cap (1) by pushing down on projecting sides (2).
2. Clean scale from inside of cover and impellor (3) with dull blade.
3. Clean flow control (4) in pump outlet with 5/32" bit.
4. Snap pump impellor cap (1) back in place.
5. Pull water hose down through hole, connect to pump, and attach nozzle into water distribution tray.

D. TO CLEAN FLOAT

1. Clean scale off float (5) and arm mechanism (6) with dull blade.
2. Work arm mechanism (6) up and down to dislodge any scale buildup.

E. TO OIL MOTOR

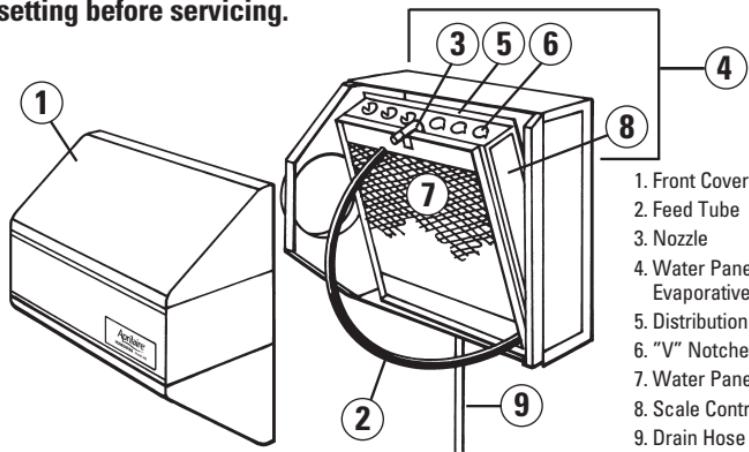
1. Disconnect water line at valve inlet and swing line free. Disconnect the humidistat leads.
2. Remove the three screws from the brown motor cover and remove.
3. Use two drops SAE 20 oil in the yellow hole on top and inside the yellow mark on the side of the motor.

F. TO REASSEMBLE

1. Replace motor cover.
2. To reinstall reservoir, hook back of reservoir over lip of dark brown metal frame and tighten knob.
3. Reconnect water at valve inlet.
4. To reinstall top cover, hook back under lip of dark brown metal frame and tighten two knobs.
5. Reconnect humidistat or control leads and electrical power.
6. Turn on water supply and fill reservoir in the fall.
7. Check unit operation.
8. Check system operation:
Manual Humidistat: Turn up humidistat to highest setting and make sure the furnace blower is operating. Humidifier will operate if RH is less than 50%.
Humidifier Control: Check system operation by setting the knob to "Test." With furnace blower operating and furnace calling for heat, humidifier will operate for one minute.
9. Set humidistat or Control to its original position.

MAINTENANCE INSTRUCTIONS for APRILAIRE HUMIDIFIER MODELS 558-560-568

CAUTION! Sudden operation may cause personal injury or property damage. Turn humidistat or control to "off" or lowest setting before servicing.



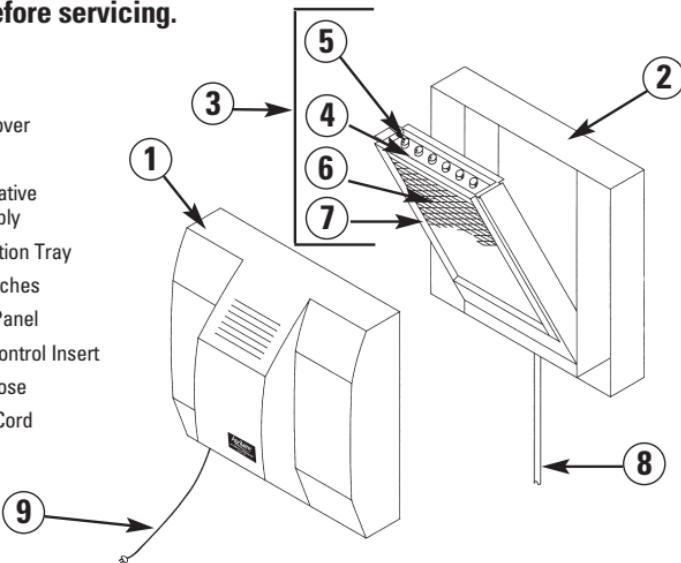
1. Front Cover
2. Feed Tube
3. Nozzle
4. Water Panel Evaporative Assembly
5. Distribution Tray
6. "V" Notches
7. Water Panel
8. Scale Control Insert
9. Drain Hose

1. Note humidistat or Humidifier Control setting and turn dial to the "OFF" position.
2. Turn off water supply.
3. At the side of the unit opposite the airflow duct pull front cover (1) off holding with both hands and set aside.
4. Carefully pull the plastic feed tube (2) out of the nozzle (3) at the top of the Water Panel evaporative assembly (4). Pull this assembly out by grasping at top and tipping out.
5. Remove the plastic distribution tray (5) from the evaporative assembly by unsnapping the plastic holding strips from the tabs at the end of the tray. Follow instructions below depending upon the type of distribution tray in your humidifier.
For trays with a synthetic fabric liner: Lightly scrape out or brush off any mineral deposits, being careful not to stretch or loosen the synthetic fabric liner. Soaking the tray in vinegar or a lime-removing agent is helpful when trying to remove stubborn mineral deposits.
For trays with granular coating: **Do not scrape off the granular coating**, but lightly scrape out any mineral deposits and clean the "V" notches. This textured surface helps ensure even water flow for maximum performance. See page 3 if removed.
6. Slide the Water Panel evaporator (7) out from the plastic Scale Control Insert (8). Clean the insert frame by twisting and flexing it to loosen the calcium deposits, or use a putty knife. Inspect the Water Panel evaporator (Stock No. 35 for Model 560) and substitute a new one if necessary. Slide the pad back into the insert frame with the colored spot up and snap the distributor tray back into place.
7. Inspect the plastic feed tube by gently flexing it and looking for cracks or signs of wear. Replace tube if it is cracked, brittle, or has been damaged.
8. Re-install the Water Panel evaporative assembly into the unit by fitting its drain into the round receptacle at the base of the unit. Push the assembly in at the top against the beveled tabs that will hold it in place. Push the end of the feed tube back firmly into the nozzle and replace the front cover.
9. Remove the drain hose (9) from the bottom of the unit and flex it to loosen the internal mineral deposits. Then flush it with water under pressure and slip it back onto the black drain fitting. Make sure the drain hose has a constant downward slope and is not flattened or blocked.
10. Turn on water supply.
11. Check system operation:
Manual Humidistat: Turn up humidistat to highest setting and make sure the furnace blower is operating. Humidifier will operate if RH is less than 50%.
Humidifier Control: Check system operation by setting the knob to "Test." With furnace blower operating and furnace calling for heat, humidifier will operate for one minute.
12. Set humidistat or Control to its original position.

MAINTENANCE INSTRUCTIONS for APRLAIRE HUMIDIFIER MODELS 760-768

WARNING! 120 volts may cause serious injury from electrical shock. Disconnect power and shut off water supply before servicing.

1. Front Cover
2. Base
3. Evaporative Assembly
4. Distribution Tray
5. "V" Notches
6. Water Panel
7. Scale Control Insert
8. Drain Hose
9. Power Cord



1. Note humidistat or Humidifier Control setting and turn dial to the "OFF" position.
2. Disconnect electrical power and turn off water supply.
3. Unlatch humidifier cover assembly (1) from base assembly (2) at the bottom of the cover, lift, and set aside.
4. Pull out the evaporative assembly (3) by grasping at the top and tipping out.
5. Remove the distribution tray (4) from the evaporative assembly (3) by unsnapping the plastic holding strips from the tabs at the end of the tray. Follow instructions below depending upon the type of distribution tray in your humidifier.
For trays with a synthetic fabric liner: Lightly scrape out or brush off any mineral deposits, being careful not to stretch or loosen the synthetic fabric liner. Soaking the tray in vinegar or a lime-removing agent is helpful when trying to remove stubborn mineral deposits.
For trays with granular coating: **Do not scrape off the granular coating**, but lightly scrape out any mineral deposits and clean the "V" notches. This textured surface helps ensure even water flow for maximum performance. See page 3 if removed.
6. Slide the Water Panel evaporator (6) out from the plastic scale control insert (7). Clean the insert frame by twisting and flexing it to loosen the mineral deposits or use a putty knife. Replace Water Panel evaporator annually with a new Water Panel evaporator (Stock No. 35). Slide the Water Panel evaporator back into the scale control insert with the colored spot up and snap the distribution tray (4) back into place.
7. Inspect the plastic feed tube by gently flexing it and looking for cracks or signs of wear. Replace tube if it is cracked, brittle or has been damaged.
8. Re-install the evaporative assembly (3) into the base assembly (2). Push the evaporative assembly (3) in at the top between the retaining ribs that hold the assembly in place in a vertical position.
9. Remove the drain hose (8) from the bottom of the unit. Flex it to loosen the internal mineral deposits. Then flush it with water under pressure and slip it back onto the drain fitting. Make sure the drain hose has a constant downward slope and is not flattened or blocked.
10. Reinstall cover assembly (1) by hooking at the top of the base assembly (2) and latching at the bottom.
11. Reconnect electrical power (9) and turn on the water supply.
12. Check system operation:
Manual Humidistat: Turn up humidistat to highest setting and make sure the furnace blower is operating. Humidifier will operate if RH is less than 50%.
Humidifier Control: Check system operation by setting the knob to "Test." With furnace blower operating and furnace calling for heat, humidifier will operate for one minute.
13. Set humidistat or Humidifier Control to its original position.

LIMITED WARRANTY

Your Research Products Corporation Aprilaire® Humidifier unit is expressly warranted for one (1) year from date of installation to be free from defects except, however, for the disposable Water Panel which will have to be replaced from time to time depending upon the amount of use.

Research Products Corporation's exclusive obligation under this warranty shall be to supply, without charge, a replacement for any part of the humidifier which is found to be defective within one (1) year period and which is returned not later than thirty (30) days after said one (1) year period by you to either your original supplier or to Research Products Corporation, Madison, Wisconsin 53701, together with the model number, manufacturing code number and installation date of the humidifier.

THIS WARRANTY SHALL NOT OBLIGATE RESEARCH PRODUCTS CORPORATION FOR ANY LABOR COSTS AND SHALL NOT APPLY TO DEFECTS IN WORKMANSHIP OR MATERIALS FURNISHED BY YOUR INSTALLER AS CONTRASTED TO DEFECTS IN THE HUMIDIFIER ITSELF.

IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL BE LIMITED IN DURATION TO THE AFORESAID ONE YEAR PERIOD. RESEARCH PRODUCTS CORPORATION'S LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, OTHER THAN DAMAGES FOR PERSONAL INJURIES, RESULTING FROM ANY BREACH OF THE AFORESAID IMPLIED WARRANTIES OR THE ABOVE LIMITED WARRANTY IS EXPRESSLY EXCLUDED. THIS LIMITED WARRANTY IS VOID IF DEFECT(S) RESULT FROM FAILURE TO HAVE THIS UNIT INSTALLED BY A QUALIFIED HEATING AND AIR CONDITIONING CONTRACTOR. IF THE LIMITED WARRANTY IS VOID DUE TO FAILURE TO USE A QUALIFIED CONTRACTOR, ALL DISCLAIMERS OF IMPLIED WARRANTIES SHALL BE EFFECTIVE UPON INSTALLATION.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages so the above exclusion or limitations may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

WARRANTY REGISTRATION

Visit us on-line at www.aprilaire.com to register your Aprilaire product.

If you do not have on-line access, please mail a postcard with your name, address, phone number, product purchased and date of purchase to:

Research Products Corporation, P.O. BOX 1828, Madison, WI 53701

Your Warranty Registration information will not be sold or shared outside of this company.

Thank you!

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